

REMARKS

The Examiner pointed out several typographic errors in the text. Applicant has amended the appropriate parts of the application to address these issues.

The Examiner has rejected claims 9-21 and 23-36 under 35 U.S.C. Section 112, first paragraph. According to the Examiner, how the layers of Fig. 1 and 2 fit into the device of Fig. 4 is not clearly described to enable any person skilled in the art to make and use the invention. Applicant respectfully traverses the Examiner's rejection. As described in the patent application, Fig. 4 shows the last storage well in the CCD (described in detail in the patent application with respect to Figs. 1 and 2) and its connection by way of a separate clocked output gate to an output differential amplifier circuit. Moreover, Applicant has amended Fig. 4 to explicitly provide the details requested by the Examiner. No new matter has been added.

In addition, the Examiner has requested clarification as to the layers of Figs. 1 and 2 through which charge reaches the output in Fig. 4. As is evident from the description on page 10, line 3 - page 11, line 21 and page 14, lines 3-20, the charge is accumulated in the quantum well (layers 159/160 of Fig. 1) of the storage region 118 of the last CCD storage well (the mesa 115 to

which the clock signal V_ϕ is applied). This accumulated charge is transferred from the quantum well of the storage region 117 through the implant 121 of the inter-electrode transfer region 116, and then through the quantum well (layers 159/160 of Fig. 1) of the adjacent barrier region 117 of the transfer gate (the mesa 115 to which the clock signal V_{dc} is applied) to the output terminal that couples the implant 121 to an input of the differential amplifier (labeled DA).

The Examiner has also rejected claims 26-36 under 35 USC 112, second paragraph, indicating that the scope of the "modulation doped heterostructure" is unclear. To address this issue, Applicant has amended claim 26 to clearly recite the structure of the modulation doped heterostructure.

In light of all of the above, it is submitted that the claims are in order for allowance, and prompt allowance is earnestly requested. Should any issues remain outstanding, the Examiner is invited to call the undersigned attorney of record so that the case may proceed expeditiously to allowance.

Respectfully submitted



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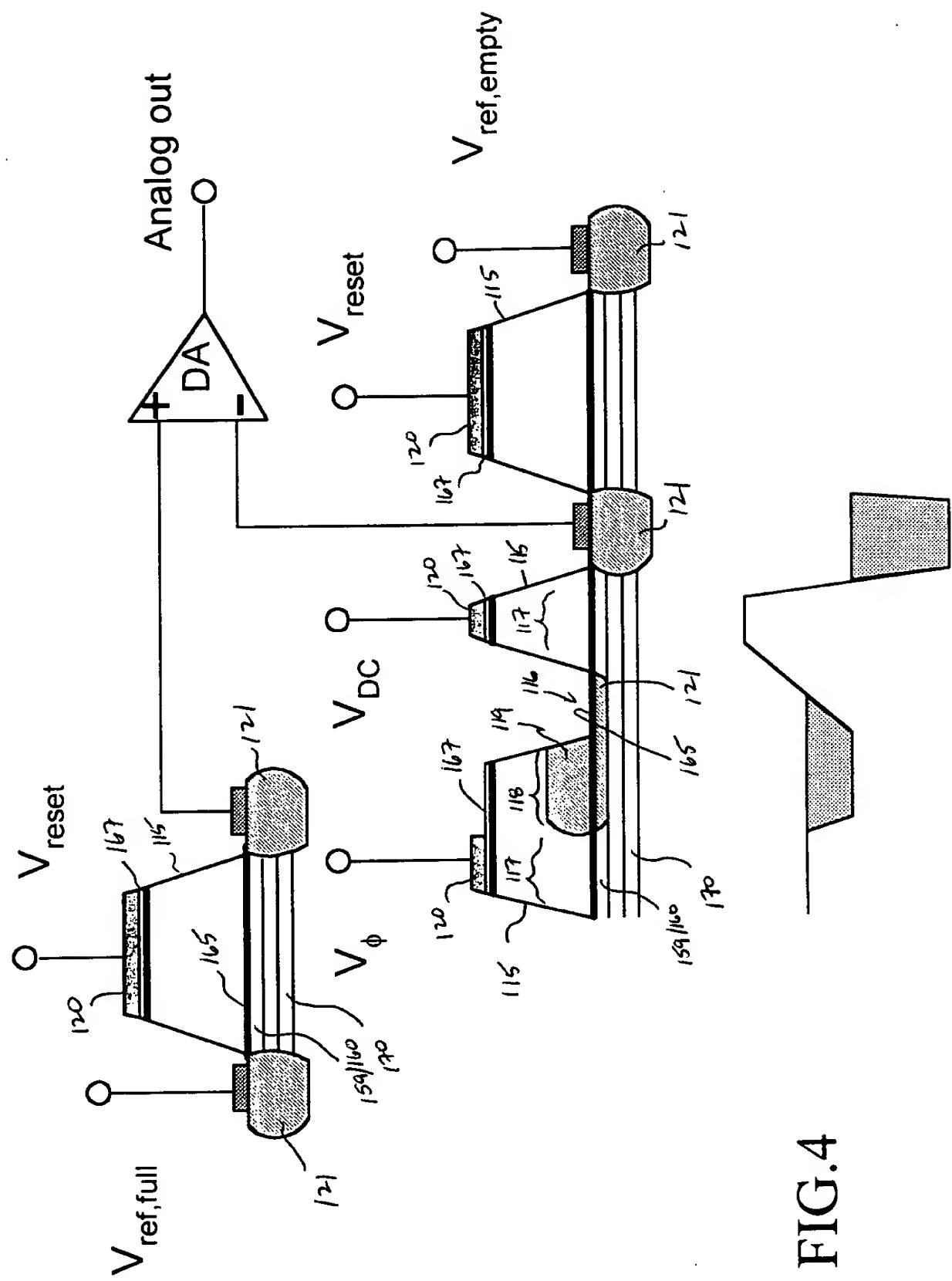


FIG. 4